

U.S. Application No.: 10/623,949
AMENDMENT B

Attorney Docket: 3827.116

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (currently amended) A tool head for employment in machine tools with
a base body (12),
a tool shank (14) projecting axially beyond the base body (12) and adapted for
being coupled to a rotating machine spindle, and
at least two blade plate receptacles (18, 18', 18") spaced apart in the
circumferential direction for receiving respectively one indexable cutting plate insert (20,
20', 20"), such that the main cutting edge in the cutting position exhibits differing
adjustment angles (α , α' , α'') relative to the base body axis,
wherein identical indexable cutting plates inserts (20, 20', 20") are provided in the
different blade plate receptacles (18, 18', 18"),
wherein the active main cutting edges (34) of the indexable cutting plates inserts
(20, 20', 20") are subdivided along their length into at least two blade cutting segments
(36, 36', 36") in alignment with each other, and
wherein for each of the various plate blade receptacles (18, 18', 18") respectively
only one of the cutting segments (36, 36', 36") of the indexable cutting plates inserts is
effective with the associated adjustment angle (α , α' , α''),
wherein the indexable cutting plates are provided with an imprint in the area of
the main cutting edge marking the individual cutting segments, and
wherein each imprinted cutting segment in the area of the main cutting edge of the
indexable cutting plates is associated with one of the plate receptacles.

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2. (currently amended) A tool head according to Claim 1, wherein the effective cutting blade segments (36, 36', 36") of the indexable cutting plates inserts (20, 20', 20") exhibit an axial separation from each other in the various plate insert receptacles (18, 18', 18").
3. (currently amended) A tool head according to Claim 1, wherein the indexable cutting plates inserts (20, 20', 20") exhibit at least three main cutting edges blade segments (34, 34', 34"), of which in the clamped-in condition respectively only one main cutting edge (34) is active with its effective cutting blade segment (36, 36', 36").
4. (currently amended) A tool head according to Claims 1, wherein the blade plate receptacles (18, 18', 18") include short clamp holders (16, 16', 16") for the indexable cutting plates inserts (20, 20', 20"), which are rigidly connected with the base body (12).
5. (currently amended) A ~~change-out cutting tool~~ head according to Claim 1, wherein in addition a reamer (22) is provided centrally projecting in the direction of advance beyond the area of the indexable cutting plates inserts (20, 20', 20").
6. (previously presented) A tool head according to Claim 5, wherein the reamer (22) is displaceable axially relative to the base body (12).
7. (cancelled)
8. (cancelled)

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9. (new) A method for relocating identical indexable cutting plates in tool heads according to claim 1, comprising the steps of,
relocating the identical indexable cutting plates between the various plate receptacles in a cyclic fashion according to a predetermined relocating scheme, wherein the relocating step brings into service the imprinted cutting segments of the active main cutting edges assigned to the plate receptacles.
10. (new) A tool head for employment in machine tools with
a base body (12) having an axis,
a tool shank (14) projecting axially beyond the base body (12) and adapted for being coupled to a rotating machine spindle, and
at least two plate receptacles (18, 18', 18'') spaced apart in the circumferential direction, each plate receptacle for receiving respectively one indexable cutting plate (20, 20', 20''), each plate receptacle oriented such that once an indexable cutting plate is provided into the plate receptacle a main cutting edge in a cutting position exhibits differing adjustment angles (α , α' , α'') relative to the base body axis,
wherein identical indexable cutting plates (20, 20', 20'') are provided in the different plate receptacles (18, 18', 18'') and each indexable cutting plate comprises at least three main cutting edges (34, 34', 34''),
wherein the main cutting edges (34) of the indexable cutting plates (20, 20', 20'') are subdivided along their length into at least two non-overlapping cutting segments (36, 36', 36'') in alignment with each other,
wherein for each of the various plate receptacles (18, 18', 18'') respectively only one of the non-overlapping cutting segments (36, 36', 36'') of each main cutting edge is effective with the adjustment angle (α , α' , α'') associated with each plate receptacle, wherein a different non-overlapping cutting segment is effective with each of the various plate receptacles.

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11. (new) A tool head according to claim 10, wherein there are at least three plate receptacles.
12. (new) A tool head according to claim 10, wherein each indexable cutting plate comprises at least five main cutting edges.
13. (new) A tool head according to claim 10, wherein the at least two plate receptacles are oriented to produce at least two different surface features in a material being machined, wherein each of the at least two different surface features is produced with a different non-overlapping cutting segment.
14. (new) A tool head according to claim 10, wherein there are three plate receptacles, each having a different adjustment angle associated therewith,
wherein a first plate receptacle is oriented for milling a valve seal ring, a second plate receptacle is oriented for milling an inlet protection bevel, and a third plate receptacle is oriented for machining an outlet protection bevel.

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